PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF ACCESSIBLE PEDESTRIAN SIGNALS AND COUNTDOWN PEDESTRIAN SIGNALS AT THE INTERSECTION OF MD 117 (CLOPPER ROAD) AND W. WATKINS MILL ROAD / PHEASANT RUN DRIVE IN MONTGOMERY COUNTY. MD 117 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA FOUR-PHASE, FULL TRAFFIC-ACTUATED MODE, THE MAINLINE PEDESTRIAN AND SB SIDE STREET ALTERNATIVE PEDESTRIAN PHASES WILL REMAIN. THE EXISTING NB SIDE STREET ALTERNATIVE PEDESTRIAN PHASE WILL BE REMOVED.

CONTROLLER REQUIREMENTS

THE EXISTING BASE MOUNTED CABINET, CONTROLLER AND ASSOCIATED HARNESSES SHALL REMAIN. THE MONTGOMERY COUNTY SIGNAL SHOP WILL INSTALL ONE (1) 2 WIRE CENTRAL CONTROL UNIT AND ONE (I) VIDEO DETECTION INTERFACE EQUIPMENT: 5-8 CAMERAS WITHIN THE CABINET.

APS WILL FUNCTION AS FOLLOWS:

TO CROSS CLOPPER RD:

- A. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS CLOPPER AT WATKINS MILL AND PHEASANT RUN, WAIT".
- B. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

TO CROSS PHEASANT RUN DR:

- . WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS PHEASANT RUN AT CLOPPER. WAIT".
- . WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

TO CROSS WATKINS MILL RD:

- 4. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS WATKINS MILL AT CLOPPER, WAIT".
- B. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

SPECIAL NOTES

- MONTGOMERY COUNTY SIGNAL SHOP SHALL INSTALL APS CONTROL UNIT INTO CONTROLLER CABINET. THE APS PUSH BUTTONS SHALL BE PROGRAMMED BY THE MANUFACTURER.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE.
- 3. ALL CONTROLLER CABINET WIRING WILL BE PERFORMED BY MONTGOMERY COUNTY FORCES. CONTACT MR. KAMAL HAMUD AT (240) 777-8761 72 HOURS IN ADVANCE OF INTENDED WORK.

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS: Mr. Cedric Ward Assistant District Engineer - Traffic Phone: 301-513-7498

Mr. Victor Grafton District Utility Engineer Phone: 301-513-7350

Mr. Vernon Stinnett Assistant District Engineer - Maintenance Phone: 301-513-7304

OFFICE OF TRAFFIC AND SAFETY:

Mr. Richard L. Daff Sr. Chief, Traffic Operations Division Phone: 410-787-7630

Mr. Robert Snyder Assistant Division Chief, Traffic Operations 410-787-7630

Mr. Edward Rodenhizer Chief Signal Operations Phone: 410-787-7650

Mr.Eugene Bailey Chief Sign Operations 410-787-7670

MONTGOMERY COUNTY:

Mr. Kamai Hamud Traffic Engineering 240-777-876i

Mr. Bob Ricketts Signal Shop 301-279-1975

The Power Company is: 8300 Old Marlboro Pike Upper Mariboro, MD 20442 Phone: 301-961-5325

EQUIPMENT LIST 'A'

EQUIPMENT: 5-8 CAMERAS

 $1 EA - MI - 5(6) (48 IN. \times 72 IN.)$

 $1EA - MI - 5(6)(30 IN. \times 48 IN.)$

 $1 EA - MI - 5(6) (48 IN. \times 72 IN.)$

 $I EA - R3-5(L)(30 IN. \times 36 IN.)$

 $I EA - R3-5(R) (30 IN. \times 36 IN.)$

"EAST, MD 117, LEFT ARROW"

"WEST, MD 117, RIGHT ARROW"

"WEST, MD 117, LEFT ARROW"

[UPDATED] DETECTOR RACK RETROFIT

[UPDATED] VIDEO DETECTION INTERFACE

EQUIPMENT TO BE FURNISHED BY THE SHA. QUANTITY **DESCRIPTION** ITEM NO

ΙEΑ

ΙEΑ

IIO SF

9046

9087

| CUPDATEDI SHEET ALUMINIUM MAST ARM/POLE MOUNTED SIGN: |
|--|
| 2 EA - RIO-3(I) (9 IN. X I5 IN.) "PUSH BUTTON TO CROSS CLOPPER ROAD" |
| 2 EA - RIO-3(I) (9 IN. X 15 IN.) "PUSH BUTTON TO CROSS PHEASANT RUN DR" |
| 2 EA - RIO-3(I)(9 IN.X 15 IN.) "PUSH BUTTON TO CROSS W. WATKINS MILL RD" |
| 2 EA - D-3(I)(96 IN.X I6 IN.) "CLOPPER RD", DUAL FACED |
| I EA - MI-5(6) (30 IN. × 48 IN.) "EAST, MD 117, RIGHT ARROW" |

EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

ITEM NO

QUANTITY **DESCRIPTION**

NONE - ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR

PROPOSED SIGNAL EQUIPMENT AND PAVEMENT MARKING LAYOUT NOT TO SCALE

TOD NO: XX354-38 SHA NO: MO255K5F MD 117 @ Watkins Mill Rd/Pheasant Run Blvd

EQUIPMENT LIST 'B'

DESCRIPTION

MAINTENANCE OF TRAFFIC

5 INCH CONCRETE SIDEWALK

TURFGRASS ESTABLISHMENT

12 INCH LED SIGNAL HEAD SECTION

BREAKAWAY PEDESTAL POLE (ANY SIZE)

2-WIRE CENTRAL CONTROL UNIT

REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS

DETECTABLE WARNING SURFACE FOR CURB RAMPS

LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD

VIDEO DETECTION CAMERA AND CABLE ANY LENGTH

NO.6 AWG STRANDED BARE COPPER GROUND WIRE

FURNISH AND INSTALL ELECTRICAL HANDHOLE

ELECTRICAL CABLE - 2 CONDUCTOR (NO. !4 AWG)

ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG), TO

REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)

UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED

UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED

INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)

12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES

24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES

AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS

STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH

ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP AND LUMINAIRE

CLASS 2 EXCAVATION

TEST PIT EXCAVATION

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

QUANTITY

3 EA

2 CY

4 CY

665 LF

430 LF

170 LF

275 LF

1.515 SF

80 SF

IO SY

24 EA

ΙEΑ

4 EA

6 EA

6 EA

6 EA

ΙEΑ

5 EA

325 LF

200 LF

IIO SF

550 LF

2 EA

1.135 LF

1,225 LF

880 LF

ITEM NO

1003

2001

2002

5003

5004

5005

6001

6002

6003

7000

1008

8002

8007

8008

8009

8016

8024

8028

8034

8036

8038

8040

8044

8051

8053

8055

| | WIRING | DIAGRAM | | | / | PEPCO NO. N⁄A |
|-----------------------------------|-----------------|---------------------------------------|----------|-------------|---|---|
| EX. O/H I/C WEST TO LONGDRAFT RD. | | Δ | —— Д | Q WE A | /A,Q | EX. O/H I/C EAST TO METROPOLITAN GROVE RD. |
| A,L,R B,G | | B,G | | W × = = | EP CONTRACTOR OF THE PROPERTY | S |
| A,M,S | ==== | = = = = = = = = = = = = = = = = = = = | F = | B,D,G,K,W,X | | A,B,C,D,E,G,H,J,K,L,M, N,O,P,Q,R,S,T,U,V,W,X |
| M G F | A,L,M,R,S | | | | | |
| В | | | | | | |
| F | | | | | ;; | |
| | | A,C,E,H,J,N,O,P,T, | .U.V 🔊 | | 11 | A,C,E,H,J,N,O,P,T,U,V |
| E,H | / ^{E,} | н | | F C | | , |
| N T U | H F | E,H | ?,v × (v | | === | |
| A,O,U | <u>¥</u> = = = | = = = = | P | | | |
| . 4010 | A,N,O,T,U | | | A,C,E,H,J | | |

STV Incorporated 7125 Ambassador Road, Suite 200 Baltimore, MD 21244

A NO. 6 AWG STRANDED BARE COPPER GROUND WIRE C ELECTRICAL CABLE - 2 D CONDUCTOR (NO. 12 AWG), TC

ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG) F -USE EXISTING CABLE

ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

CONTROL CABLE - VIDEO DETECTION CAMERA TO CONTROLLER EPS - EXISTING POWER SERVICE

EXISTING GROUND ROD - 3/4 INCH DIAMETER X IO FOOT LENGTH PROPOSED GROUND ROD - 3/4 INCH DIAMETER X IO FOOT LENGTH

15' 10.5 18.5'

| | 1 | | 1 | 1 | | | ı | 1 | | 1 | 1 | 1 | | Т | |
|-----------------------|-------------|---------|------|------|-------------|----------------|------|------|-------|-------|-------|-------|-------|-------|------------|
| <u> Phase Chart</u> | 1 | 2 | 3 | 4 | _ 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | |
| | R Y G | (R)>(G) | RYG | RYG | R Y G | (R) Y) G | RYG | RYG | | ŒH. | | | | | |
| PHASE 2 AND 6 | | G | G | G | R | R | R | R | W/K | W/K | W/K | W/K | DW | DW | 00 |
| PED CLEARANCE | | G | G | G | R | R | R | R | FL⁄DW | FL⁄DW | FL⁄DW | FL⁄DW | DW | DW | 7 |
| 2 AND 6 CHANGE | | Υ | Υ | Υ | R | R | R | R | DW | DW | DW | DW | DW | DW | 0 H |
| PHASE 4 AND 8 | R | R | R | R | G | G | G | G | DW | DW | DW | DW | DW | DW | A |
| 4 AND 8 CHANGE | R | R | R | R | Υ | Υ | Υ | Υ | DW | DW | DW | DW | DW | DW | 1 |
| PHASE 4 ALT AND 8 | R | R | R | R | G | G | G | G | DW | DW | DW | DW | W/K | W/K | 위 🗘 |
| PED CLEARANCE | R | R | R | R | G | G | G | G | D/W | D/W | D/W | D/W | FL⁄DW | FL/DW | |
| 4 ALT AND 8 CHANGE | | R | R | R | Υ | Υ | Y | Υ | DW | DW | DW | DW | DW | DW | |
| FLASHING OPERATION | FL/Y | FL/Y | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | DARK | DARK | DARK | DARK | DARK | DARK | 4 + |

TS NO.2457-A-GI

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION

W. WATKINS MILL ROAD /PHEASANT RUN DRIVE GAITHERSBURG, MARYLAND

GENERAL INFORMATION

MD 117 (CLOPPER ROAD) AT

SCALE NONE ADVERTISED DATE 5/1/20111 CONTRACT NO. XX3545168R MONTGOMERY LOGMILE TOD NO.

SHEET NO. 02 OF 02

DRAWING **SG-02** OF 02

PLOTTED: Monday, May 02, 2011 AT 03:02 PM ILE: I:\PROJECTS\4014255\4014255_0094\Drawings\TRA\pSG-N000_MD117.dgn